



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

NOV 1 2004

Honorable Kendl P. Philbrick, Secretary
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, MD 21230

Dear Secretary Philbrick:

This letter responds to your letter dated September 2, 2004 ("September 2, 2004 letter"), in which the Maryland Department of the Environment ("MDE") proposed revisions to the November 1998 *Memorandum of Understanding between the State of Maryland and the United States Environmental Protection Agency Region III regarding Sections 303(d) and 303(e) of the Clean Water Act* ("MOU"). The MOU was originally executed in November 1998 to provide a framework for MDE and the U.S. Environmental Protection Agency Region III ("EPA") to work together to implement Sections 303(d) and 303(e) of the Clean Water Act, 33 U.S.C. § 1313(d) & (e).

By this letter and by counter-signing your letter, I am indicating EPA's agreement to MDE's proposed revisions to the MOU. These revisions affect Sections II.B, II.C, II.D, II.G, VI, and VIII of the MOU. All other portions of the MOU remain unchanged. Enclosure 1 provides the detailed MOU language changes to ensure that MDE and EPA are in agreement with the specific revisions. Enclosure 2 serves to convey the results of EPA's periodic re-evaluation of Maryland's TMDL program. Enclosure 2 also provides a summary of the proposed changes to the MOU as well as clarifying language.

EPA believes that Maryland has made significant efforts and remains committed to implementing its TMDL program. While MDE has encountered challenges in implementing its TMDL program, EPA notes that MDE has committed, through the modifications to the MOU, to producing TMDLs at a more robust pace than the previous five years. EPA also notes that MDE provided the public with an opportunity to comment on MDE's proposed revisions to the MOU and has responded to public comments received.



Thank you for your efforts in implementing Section 303(d) in the State of Maryland. We at EPA look forward to working with you to restore and maintain the health of Maryland's waters.

Sincerely,

A handwritten signature in black ink, appearing to read "Don Welsh".

Donald S. Welsh
Regional Administrator

Enclosures (2)

ENCLOSURE 1
Specific Language Changes to the Maryland TMDL MOU

MOU Section

Revised Language

II.B.

B. EPA and Maryland understand that TMDLS do not need to be established for any WQLS that are removed from the 1998 303(d) List of WQLSs contained in Exhibit A, and whose removal is approved by EPA. A WQLS may be removed from an approved 303(d) List for any of a number of reasons including but not limited to:

- (1) more recent or more accurate monitoring and assessment information and/or more sophisticated water quality modeling indicates that the WQLS attains WQSs;
- (2) new information indicates that, as a result of changes in conditions, including implementation or enforcement of technology-based pollution controls, the WQLS is expected to attain applicable WQSs before April 1 of the next even-numbered year as the result of implementation of required pollution controls;
- (3) new information shows that, upon re-examination, the State determines that the original basis for listing the WQLS on the 303(d) list was inaccurate;
- (4) Maryland determines for other reasons consistent with the law and applicable regulations that the WQLS does not need a TMDL pursuant to Section 303(d) of the CWA and 40 CFR 130.7, as amended, and EPA approves Maryland's determination;
- (5) Maryland determines that the impairment is not caused by a pollutant, and EPA approves Maryland's determination.

II.C.

C. Subject to available resources, MDE will use best efforts to establish and submit to EPA, on or before ~~December 31, 2008~~ September 30, 2011, and in accordance with the Watershed Cycling Strategy described in paragraph II.D and the schedule provided as Attachment B to the letter from Kendl P. Philbrick, Secretary, Maryland Department of the Environment to Donald S. Welsh, Regional Administrator, U.S. EPA Region III dated September 2, 2004 ("September 2, 2004 letter"), which is attached hereto as Exhibit E, ~~and the schedule attached hereto as Exhibit B,~~ TMDLs for each of the WQLSs identified in Maryland's ~~1996~~ 1998 303(d) list that are not removed from the list pursuant to section 11.B, above. For the WQLSs added to Maryland's 303(d) list in 1998 and subsequent years, MDE will commence the work (including but not limited to monitoring, data collection and modeling) necessary to establish TMDLs within five years of listing for those segments having high priorities, and within ten years and in accordance with the Watershed Cycling Strategy described in paragraph

II.D. for all other segments. In all cases, TMDLs will be established or WQLSs will otherwise be removed from the 303(d) list pursuant to section II.B. above by September 30, 2011 (for WQLSs identified on the 1998 303(d) list) or within thirteen (13) years of the initial listing (for WQLSs initially listed in 2002 or subsequent 303(d) lists).

- II.D.(4), (5) D. EPA understands that Maryland intends to develop TMDLs for the WQLSs remaining on the 1998 303(d) list and future 303(d) lists through a watershed approach, as provided in Exhibit C, Maryland Department of the Environment Plan for TMDL Watershed Cycling Strategy ("the Cycling Strategy"), subject to the descriptions and limitations set forth in this Paragraph.

* * *

- (4) Twenty-one WQLSs listed on the 1998 303(d) list and identified in Enclosure A of the September 2, 2004 letter attached hereto as Exhibit E are physically adjacent to or open waters of the Chesapeake Bay, such that they could be considered part of the Chesapeake Bay for modeling purposes. Timing and development of TMDLs for these waters will be coordinated with the Chesapeake Bay Program, rather than through the Watershed Cycling Strategy.
- (5) Timing and development of TMDLs for sixty-six WQLSs listed on the 1998 303(d) list for suspended sediments in tidal waters will be coordinated with the Chesapeake Bay Program in order to take advantage of expertise being developed by the Chesapeake Bay Program, rather than through the Watershed Cycling Strategy. These sixty-six waters are identified in Enclosure A in the September 2, 2004 letter attached hereto as Exhibit E.

- II.G. G. EPA and Maryland agree to produce, on or before December 31, 1998, and on or before ~~August 1~~ October 31 of each year after 1998 that this MOU is in effect, an annual workplan that (1) identifies the watersheds that will be the focus of monitoring and modeling/TMDL development during the following two federal fiscal years, and (2) identifies the TMDLs to be established by Maryland in the following two federal fiscal years. This workplan will be included as part of the annual report described in Part IV of this MOU. In order to facilitate good communications between the parties, Maryland agrees to use best efforts to send EPA preliminary draft TMDLS well in advance of any deadlines; EPA agrees to use best efforts to review and provide timely comments on those preliminary draft TMDLS.

- VI. Reports. On or before August 1, 1999 and on or before October 31 of each year after 1999 that this MOU is in effect, ~~thereafter August 1 of each year that~~

~~this MOU is in effect beginning August 1, 1999~~, Maryland will provide an annual status report to EPA describing progress toward completion of the obligations identified in this MOU including but not limited to (1) the Cycling Strategy and workplan described in Part II Section G, above; (2) current and projected funding available to Maryland to carry out the obligations identified herein; and (3) other related issues or problems that prevent or delay accomplishment of the requirements of this MOU.

VIII.

Termination. This MOU shall terminate upon the establishment of TMDLs for all WQLSs on the 1998 Section 303 (d) List for which TMDLs are required and the submission of a revised CPP, which Maryland anticipates will be completed by ~~October 1, 2008~~ September 30, 2011.

ENCLOSURE 2
EPA's Periodic Re-Evaluation of Maryland's TMDL Program
October 28, 2004

In September 1999, MDE provided EPA with, among other things, a refined long-term schedule for development of total maximum daily loads (TMDLs) and an explanation of staff resources dedicated to TMDL development. Upon receiving the information provided by MDE in September 1999, EPA completed its review of Maryland's total maximum daily load (TMDL) program (September 1999 letter). Based on Maryland's commitment of resources and efforts, EPA concluded that Maryland had demonstrated its intent to implement CWA Section 303(d) in a meaningful and timely way. Accordingly, EPA determined that it was not necessary for EPA to step in and to develop TMDLs in Maryland. EPA stated that it would re-evaluate its determination if it appeared that Maryland was not making its best efforts to adhere to its schedule and MOU commitments. EPA stated that it would consider, among other factors, whether the TMDLs submitted by Maryland are consistent with the long-term schedule, and whether those TMDLs are in a form that is approvable by EPA. Based on this most recent program review that follows, EPA believes that MDE is committed to implementing the TMDL program and there is no need for EPA to step in and compete TMDLs in Maryland at this time.

In a memorandum dated August 8, 1997, signed by the Assistant Administrator for EPA's Office of Water (1997 Memorandum), EPA requested each state to establish an appropriate schedule for establishing TMDLs for all waters on its 1998 Section 303(d) list (and all lists submitted thereafter). The 1997 Memorandum recommended that "state schedules should be expeditious and [should] normally extend from eight to thirteen years in length, but could be shorter or slightly longer," subject to a number of factors including the complexity of the TMDLs to be developed, the availability of data, and the relative significance of the environmental harm or threat to be addressed. While the 1997 Memorandum acknowledges that the overall schedule may change to reflect new waters added to the list as part of the Section 303(d)(2) approval process, it also urges states to complete TMDLs for particular waterbodies within the time frame originally specified for that waterbody (i.e., no later than 13 years from the date of initial listing).

By entering into the MOU in 1998, MDE agreed, among other things, to exercise best efforts to:

- Timely submit lists of water quality limited segments pursuant to Section 303(d) and 40 C.F.R. § 130.7. (Section I)
- Establish TMDLs or otherwise resolve all impairments identified on Maryland's 1998 Section 303(d) list by December 31, 2008. (Section II.C)
- Develop TMDLs pursuant to Maryland's Watershed Cycling Strategy. (Section II.D)

- Produce an annual workplan on or before August 1 of each year that (1) identifies the watersheds that will be the focus of monitoring and modeling/TMDL development during the following two Federal fiscal years, and (2) identifies the TMDLs to be established by Maryland in the following Federal fiscal year. (Section II.G)
- Where TMDLs have been established and approved, to reissue existing NPDES permits and issue new NPDES permits as necessary to comply with the requirements set forth in 40 CFR § 122.44(d)(1)(vii)(A) and (B). It was anticipated that permits would be issued and reissued consistent with Maryland's Watershed Cycling Strategy. (Section II.H)
- To submit a document describing Maryland's revised Continuing Planning Process ("CPP) on or before October 1, 1999. (Section III.B)
- On or before August 1 of each year, to provide an annual status report to EPA describing progress toward completion of the obligations identified in the MOU. (Section VI)

In November 1998, neither MDE nor EPA had significant experience with developing large numbers of TMDLs in relatively short time periods. Section II.C and the long term schedule provided by MDE in September 1999 committed to establishing TMDLs or otherwise resolving listings on the Section 1998 303(d) list within ten years. This commitment represented MDE's good faith effort to identify the timing of specific TMDLs and pace of TMDL development, recognizing that MDE had limited experience developing TMDLs. The MOU stated: "EPA recognizes that Maryland may not be able to establish TMDLs within the timeframes specified in the Cycling Strategy and work plans provided for under this MOU due to the inability of Maryland to obtain additional funding, a change in priorities resulting from a subsequently approved 303(d) list, or other unforeseen circumstances that are beyond the control of Maryland. If for any of these reasons, Maryland is unable to establish TMDLs in accordance with the Cycling Strategy and related work plans, then MDE and EPA will attempt to reach agreement on a reasonable extension of time in which Maryland may establish the TMDL." (Section V.D). In its September 1999 letter, EPA noted that there can be a discernible "learning curve" associated with developing TMDLs. EPA also acknowledged that it might be necessary for MDE to modify its long-term TMDL development schedule based on such factors as new information, refined or additional data, public comment and participation, refined or supplemented technical information, changing priorities as a result of new Section 303(d) lists, interstate coordination and modifications to Federal or state regulations or laws.

At the time that MDE and EPA entered into the MOU, EPA had approved Maryland's 1998 Clean Water Act (CWA) Section 303(d) list of waters requiring TMDLs (1998 Section 303(d) list). Since that time, EPA has approved Maryland's 2002 Section 303(d) list. In addition, Maryland has submitted for EPA's approval its 2004 Section 303(d) list. As of September 28, 2004, MDE has established and EPA has approved 121 TMDLs or water quality analysis (WQA) demonstrating that no TMDL was needed. These include 50 TMDLs/WQAs for nutrients, 15 TMDLs/WQAs for sediment, 15 TMDLs/WQAs for toxic substances, 2 biological

TMDLs/WQAs, 1 pH TMDL, 4 bacteria TMDLs/WQAs and 9 mercury TMDLs/WQAs. In addition, pursuant to the schedule proposed in the September 2, 2004 letter, MDE has submitted 35 TMDLs/WQAs. On September 30, 1999, MDE provided EPA with a proposed outline CPP. MDE provided a draft CPP for review and comment on February 4, 2000, and provided a final CPP on May 1, 2001. EPA approved Maryland's revised CPP on December 6, 2001.

In addition, MDE and the Maryland Department of Natural Resources, have devoted significant resources to activities that will eventually lead to TMDL development or otherwise resolve listed impairments. MDE has been working on methodologies for analyzing mercury in lakes, bacteria in tidal shellfish water, bacteria in non-tidal streams, contaminants in sediment bottoms, and source assessments for waters that have been identified as biologically impaired. MDE has developed a methodology for using biological data collected by the Maryland Biological Stream Survey and has worked with the Virginia Department of Environmental Quality to develop a methodology to use aquatic life and habitat data collected in tidal waters. MDE also has funded monitoring and modeling of the Potomac River.

Since at least the mid-1980's, Maryland has utilized watershed modeling and the concept of wasteload allocations to develop water quality based limits for NPDES permits. Since 1997, EPA staff have met frequently with staff from MDE, the Maryland Department of Natural Resources (DNR), and other state agencies regarding various aspects of Maryland's Section 303(d) program, including the development of TMDLs. MDE has incorporated wasteload allocations developed as part of TMDLs in numerous major and minor NPDES permits. For example, effluent limits derived from TMDL wasteload allocations were incorporated in the permit issued to the Princess Anne POTW in 2003. As MDE has acknowledged, the Clean Water Act appropriately places on each State the primary responsibility for implementing the TMDL program within its borders.

EPA notes that the portion of the mainstream of the Chesapeake Bay within Maryland's borders is not identified for TMDL development in the long term schedule, although the Chesapeake Bay mainstream does appear on the 1998 Section 303(d) List. The Chesapeake Bay states have agreed to strive to meet water quality goals in the Chesapeake Bay by 2010. EPA intends that a final TMDL, if necessary, will be established by 2011. Maryland has been an active participant in the efforts of the Chesapeake Bay program to achieve water quality goals in the Chesapeake Bay. MDE has conducted much of the monitoring used to support modeling of the Chesapeake Bay and its tidal tributaries and contributed resources to the development of the Chesapeake Bay model.

EPA has provided technical assistance and guidance to Maryland by providing training, making personnel available for consultation and public meetings, and by making available to Maryland examples of work products developed by other states and/or contractors. EPA is currently working with Maryland to establish a demonstration mercury TMDL for Liberty Reservoir. In addition, EPA staff has worked closely with staff from MDE both before and after the submission of TMDLs to ensure that the TMDLs established by Maryland will achieve the

goals of Section 303(d) of the Clean Water Act. By statute, EPA must review and approve or disapprove TMDLs submitted by Maryland, and EPA will continue to meet its obligation. EPA also will continue to support Maryland's efforts to develop TMDLs in compliance with the Clean Water Act and the MOU.

Accordingly, EPA agrees with the following proposed revisions to the MOU set forth in greater detail in Enclosure 1:

- Extension of time to complete TMDLs or otherwise resolve impairments on the 1998 Section 303(d) list to September 30, 2011. (Section II.C) (Note that this timeframe remains consistent with EPA guidance that TMDLs should be established in 8-13 years).
- MDE will commence the work (including but not limited to monitoring, data collection and modeling) necessary to establish TMDLs within five years of listing for those water quality limited segments that are designated as high priority and within ten years for all other segments. (Section II.C)
- Recognition that a TMDL need not be established if Maryland determines that an impairment is not caused by a pollutant and EPA approves Maryland's determination. (Section II.B)
- Timing and development of TMDLs for twenty-one water quality limited segments listed for nutrients and sixty-six water quality limited segments listed for suspended sediments in tidal waters identified in Enclosure A to your September 2, 2004, letter will be coordinated with the Chesapeake Bay Program rather than through the Watershed Cycling Strategy. (Section II.D)
- MDE will produce an annual workplan on or before October 31 of each year that identifies the watersheds that will be the focus of monitoring and modeling/TMDL development during the following two federal fiscal years, and that identifies the TMDLs to be established by Maryland in the following two federal fiscal years. (Section II.G)
- MDE will provide an annual status report to EPA on or before October 31 of each year describing progress toward completion of the obligations set forth in the MOU. (Section VI)
- The MOU will terminate upon establishment of TMDLs or other resolution for all water quality limited segments on the 1998 Section 303(d) list by September 30, 2011.

With respect to MDE's commitment to begin "addressing" high priority waters within five years and all other segments within ten years, EPA notes that the September 2, 2004 letter defines the term "address" as "beginning work that may include model/method development or monitoring. "Address" does not necessarily imply that all aspects of an impairment will be

resolved within five years. Depending on the complexity of the system and scientific issues involved, final resolution may take longer, but all listings will be completed within 8-13 years per EPA policy." The term "address" does not appear in the MOU or in the language revisions to the MOU in the enclosure. Nevertheless, the term has significance because the September 2, 2004 letter and MDE's response to comments sometimes appear to use the term "address" to refer to resolution of impairments. For example, on page one, the September 2, 2004 letter states that: "Current EPA guidance allows 8-13 years to address listed waters." EPA's guidance recommends that all impairments be resolved within 8-13 years. Page A2 of Enclosure A states that: "As of the end of 2003, 61 listings had been addressed ..." In fact, MDE had established TMDLs or developed WQAs for 61 listings as of the end of 2003. Other examples include footnotes 1 and 4 to Table 1a in Enclosure B, footnote ** to Table 2 in Enclosure B, the heading in Table 3 in Enclosure B, several locations, including headings and footnotes in Enclosures C and D. The use of the term "address" in Enclosure C is of particular concern because EPA cannot determine based on Enclosure C which TMDLs will be fully completed in a particular year, as opposed to water quality limited segments as to which monitoring and/or modeling will be commenced. Accordingly, we request that MDE clarify Enclosure C. The use of the term "address" is also of concern in Enclosure E, in which MDE refers to "[c]ompletion of *addressing* all 1998 303(d) listings in September 2011." In that instance, EPA assumes the term "addressing" refers to resolving all impairments listed on the 1998 303(d) list, consistent with the MOU revision.

EPA notes that, while MDE has produced 61 TMDLs or WQAs of high quality, MDE has encountered a number of challenges in implementing its TMDL program. In a letter from MDE dated September 2, 2004, it is noted that MDE has experienced budget reductions that have impacted the pace of TMDL development. Nevertheless, it is EPA's understanding that MDE has devoted approximately 40.5 full time equivalent employees to various aspects of TMDL development and implementation, including technical development, monitoring, list development, administrative support, data management and processing, legal support, and public outreach coordination.

In addition, MDE has been working to develop methodologies for modeling and establishing complex TMDLs. These include TMDLs for bottom sediments in the Baltimore Harbor, bacteria in shellfish waters, and mercury. The resources devoted to developing these methodologies has necessarily taken away from performing the actual analyses. Nevertheless, it is expected that MDE will be able to utilize these methodologies to establish more TMDLs more efficiently in the future. As the national TMDL program matures, EPA and the states are developing methodologies for various pollutants and types of TMDLs. EPA strongly encourages MDE to use methodologies previously developed by EPA and others where applicable. EPA also encourages MDE to consider developing TMDLs on a watershed-wide basis for all pollutants impacting a particular watershed. In EPA's experience, a watershed-based approach to TMDL development is an efficient and scientifically supportable approach.

Initially, MDE indicated that its TMDL development activities would generally track its five-year Watershed Cycling Strategy. Through the Watershed Cycling Strategy, the five larger watersheds in Maryland have been monitored for eutrophication, and a major portion of toxics monitoring has been completed. In 2004 and 2005, MDE is focusing on monitoring for sediments, fecal coliform and additional toxics to respond to impairment listing. Technical complexities associated with some TMDLs, such as the Baltimore Harbor, caused a shift in resources and a corresponding departure from the Watershed Cycling Strategy. MDE intends to return to the original five-year schedule in 2006.

MDE continues efforts to coordinate TMDL development through the Watershed Cycling Strategy. However, MDE has determined that some waters would better be coordinated through the Chesapeake Bay Program. EPA agrees with MDE's determination to coordinate twenty-one nutrient TMDLs and sixty-six sediment TMDLs through the Chesapeake Bay Program, rather than through the Watershed Cycling Strategy. This approach is consistent with a watershed-based approach. In addition, it will allow MDE to take advantage of monitoring, modeling and other work being performed by the Chesapeake Bay Program. It will also ensure that TMDLs developed by MDE will be consistent with efforts to achieve water quality goals in the Chesapeake Bay. Finally, the MOU deadline of September 30, 2011 is consistent with EPA's goal of achieving water quality goals or establishing a TMDL for the Chesapeake Bay by 2011. It is worth noting that MDE has established local nutrient TMDLs for a number of the sixty-six sediment-impaired waters that will be coordinated with the Chesapeake Bay Program, including the Manokin River, Wicomico Creek, Marshyhope Creek, Transquaking River, Corsica River, Bohemia River, Sassafras River, Stillpond-Fairlee, Western Branch, and Port Tobacco River. MDE also previously has established a chlordane TMDL for the Back River.

Finally, in evaluating whether it should step in to establish TMDLs in Maryland, EPA believes it is reasonable to take into account EPA's overall national policy goals, statutory obligations, and resource constraints. EPA is obligated by Consent Decrees to establish TMDLs in five states (Pennsylvania, Delaware, Virginia, West Virginia and the District of Columbia) if those jurisdictions fail to do so. Under these Consent Decrees, EPA could be obligated to establish hundreds of TMDLs in certain years. EPA's obligations under these Consent Decrees are set forth below:

Number of TMDLs to be Established by the State (or by EPA if the State Fails to Act)

| <u>Year</u> | <u>PA</u> | <u>DE</u> | <u>VA</u> | <u>WV</u> | <u>DC</u> |
|-------------|-----------|-----------|-----------|-----------|-----------|
| 2004 | 0 | 29 | 83 | 0 | 23 |
| 2005 | 125 | 83 | 0 | 0 | 0 |
| 2006 | 0 | 73 | 237 | 250 | 0 |
| 2007 | 125 | 0 | 0 | 0 | 3 |
| 2008 | 0 | 0 | 141 | 119 | 0 |
| 2009 | 184 | 0 | 0 | 0 | 0 |
| 2010 | 0 | 0 | 212 | 0 | 0 |

EPA has the responsibility of overseeing state program implementation and discretionary authority to take appropriate action in the case of inadequate state action in carrying out its Section 303(d) responsibilities. EPA firmly believes that the most efficient and effective approach for the Agency to implement its oversight responsibilities is to work in partnership with states to assist them in developing state TMDL programs that are consistent with the goals and requirements of the Clean Water Act. Therefore, EPA believes it should not exercise its discretion to step into the states' shoes without good reason.

In summary, MDE has made significant progress in developing and implementing its TMDL program over the past six years. While MDE has encountered some challenges, MDE also has developed significant knowledge and experience in TMDL development that should enable MDE to proceed at a more robust pace in the future. Maryland's commitment of resources and efforts thus far demonstrate that Maryland is implementing CWA Section 303(d) in a meaningful way.